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16 March 1964

MEMORANDUM FOR: Chairman, Technical Development Committee

THROUGH : Executive Secretary, TDC

SUBJECT : Staff Study - [ ] Proposal  
for Collection of Multi-Sensor Data and Ground Truth Data

1. PROBLEM:

To acquire the aerial imagery and ground truth data necessary to determine the proper exploitation techniques for using sequential day photography and night [ ] for around-the-clock surveillance of target activity levels in a suspected military build-up.

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2. FACTS:

a. [ ] sensors have been flown over numerous targets to determine sensor effectiveness in general-purpose detection and identification. These studies have shown that, at night, [ ] scanners are capable of acquiring imagery which has sufficient resolution to identify most targets of military interest. None of the projects, however, have demonstrated that night [ ] imagery can be effectively related to photography obtained a few hours earlier. However, it now appears that this could be one of the more obvious uses of [ ] scanners in the near future: for, correct analysis of daylight photography plus night time [ ] imagery over the same targets would be an ideal method of continual, around-the-clock surveillance of an area of suspected military "build-up." Yet, to date, there is little objective knowledge about the quantity or reliability of data which can be interpreted from [ ] imagery under these circumstances. Furthermore, there is little knowledge about the additive intelligence value of the [ ] "history" of a suspect target over a period of a week or so. It is suspected that activity level interpretation can be improved considerably by this additive thermal information.

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b. Therefore, procurement of material is proposed to determine the most effective techniques for using sequential day and night imagery (from a combination of camera and [ ] scanner) to determine changes in target activity. More specifically, the proposed project would seek to simulate acquisition and analysis of changing activity levels of certain targets which are indicators of military "build-up". It should be emphasized that this investigation is not directed toward imagery acquisition methods, but to the problem of imagery analyses and exploitation techniques.

c. This project has been planned to be performed in two phases:

(1) Phase I - Data acquisition would be performed by [ ] as an "add-on" to an existing DD/S&T contract and with the cooperation of DD/S&T.

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SUBJECT: Staff Study - [REDACTED] Proposal for  
Collection of Multi-Sensor Data and Ground Truth Data

(2) The Data Reduction Phase would be performed by a separate contractor. Requests for proposals for Phase II have been mailed to five potential bidders. A Staff Study on this phase will be submitted to TDC at a later date.

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3. RECOMMENDATIONS:

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[REDACTED] be awarded a CPFF "add-on" work statement to the DD/S&T contract. This would necessitate a transfer of approximately [REDACTED] to DD/S&T.

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[REDACTED]  
Development Branch, P&DS

Attachment:

Research Objective, P&DS,  
dated 10 January 1964

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